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reach threshold before age 40. The threshold is 1 to 2 years lower if 50% rather than 20% of new angina is considered to be incapacitating. **CONCLUSION:** The methodology provides a precise, accurate method for estimation of CVD risk for commercial and private pilots. The new method introduces objectivity and a level 'playing field' for assessment of pilot cardiovascular risk.

PMT17

DEALING WITH SKEWED DATA: AN EXAMPLE USING ASTHMA-RELATED COSTS OF MEDICAID CLIENTS

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Inhaled steroid agents are recommended for patients with chronic asthma. **OBJECTIVE:** The objective of this study was to compare asthma-related prescription and medical costs between a cohort of patients with inhaled steroid use (experimental) and without inhaled steroid use (control). **METHODS:** 99 Medicaid patients with an asthma diagnosis who received add-in inhaled steroids were matched to 99 patients with an asthma diagnosis who used therapies other than inhaled steroids. Data were collected for the 6 months before the addition of an inhaled steroid (pre-utilization phase); for the 6 months immediately after the addition (stabilization phase); and for the 6 months after the stabilization phase (post-utilization phase). **RESULTS:** Compared to the pre-utilization phase, prescription costs in the post-utilization phase increased by an average of \$57 per month for the experimental group, while only increasing by an average of \$4 per month for the control group. Conversely, compared to the pre-utilization phase, medical costs in the post-utilization phase decreased by an average of \$53 per month for the experimental group and increased by an average of \$14 per month for the control group. These cost data were not normally distributed. Statistical comparisons using various methods addressing skewed data were considered (Mann-Whitney U, log transformation, and bootstrapping). The advantages and disadvantages of using each method will be outlined. **CONCLUSION:** The data indicate that the addition of inhaled steroids increases prescription costs while decreasing medical costs. The level of statistical significance differs depending on the type of test used.

PMT18

BIAS ARISING FROM MISSING DATA IN A RETROSPECTIVE STUDY OF THE OUTCOMES OF INTRA-ABDOMINAL INFECTIONS

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BACKGROUND: During a retrospective study of intra-abdominal infections we found that case notes for adult patients were destroyed or incompletely microfiched if the patient had no contact with the hospital for six years. **OBJECTIVES:** To test the hypothesis that patients with unobtainable case notes would have higher in-hospital mortality and that this would bias the study sample. **METHODS:** Patients who might have community acquired intra-abdominal infections were identified at three acute hospitals from Scottish Morbidity Records (SMR) for 1993 to 1995 by the following ICD9 codes: 567 (peritonitis); 540 (appendicitis); 531–534 (gastric, duodenal, peptic or gastrojejunal ulcers with perforation). Medical records were obtained to validate the diagnosis and to obtain details of antibiotic therapy and its outcome. If medical records were unobtainable the date of death and duration of admission were identified from the electronic SMR record. **RESULTS:** A total of 867 cases were identified. For 339 (39%) of these, case notes were unobtainable or incomplete. SMR could be used to calculate in hospital mortality and duration of stay for 334 (98%) of patients with unobtainable or incomplete medical records and 510 (97%) of patients with complete notes. The proportion of female patients was similar (51% *versus* 50%). However, the patients with unobtainable or incomplete records were significantly older (median age 72 *versus* 53.5; $P = 0.0001$ Wilcoxon test) and significantly more of them died in hospital (45% *versus* 7%; relative risk of death in hospital 6.75; 95% CI 5.08–8.96). Median length of stay (10 days *versus* 9 days; $P = 0.27$ Wilcoxon test) and total hospital cost (£2885 *versus* £2746; $P = 0.68$) were similar in the two groups. **CONCLUSION:** Missing data have biased the study sample by excluding older patients with worse outcome. Selective destruction of case notes is an important source of bias in retrospective outcomes studies.

PMT19

NON-RANDOMIZED STUDIES COMPARING OLANZAPINE AND RISPERIDONE: BASELINE SIMILARITIES AND DIFFERENCES

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OBJECTIVE: To review the baseline similarities and differences between olanzapine- and risperidone-treated patients, as described in epidemiologic studies, and recommend a set of potential confounders that should be addressed in such studies. **METHOD:** All 24 non-randomized olanzapine-risperidone comparisons cited in Medline or presented as posters at major psychiatric conferences (APA, ECNP, WPA) through 1999 were included. The direction, magnitude, and statistical significance of all baseline comparisons of the two treatment groups were recorded, if available. **RESULTS:** Across all use, diagnosis distribution and mean age differed without consistent direction. Comorbidities, number of different